

GURU NANAK INSTITUTE OF TECHNOLOGY
An Autonomous Institute under MAKAUT
2022
OBJECT ORIENTED PROGRAMMING USING JAVA
IT402

TIME ALLOTTED: 3 HOURS

FULL MARKS: 70

*The figures in the margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable***GROUP – A****(Multiple Choice Type Questions)**Answer any **ten** from the following, choosing the correct alternative of each question: **10×1=10**

- | | Marks | CO No. |
|---|-------|--------|
| 1. i) What is the process of defining more than one method in a class differentiated by method signature? | 1 | CO5 |
| a. Function overriding | | |
| b. Function overloading | | |
| c. Function doubling | | |
| d. None of the mentioned | | |
| ii) Which of this statement is incorrect? | 1 | CO3 |
| a. All object of a class are allotted memory for the all the variables defined in the class | | |
| b. If a function is defined public it can be accessed by object of other class by inheritance | | |
| c. main() method must be made public | | |
| d. All object of a class are allotted memory for the methods defined in the class | | |
| iii) What would be the behavior if this() and super() used in a method? | 1 | CO2 |
| a. Runtime error | | |
| b. Throws exception | | |
| c. compile time error | | |
| d. Runs successfully | | |
| iv) Which of this method is given parameter via command line arguments? | 1 | CO5 |
| a. main() | | |
| b. recursive() method | | |
| c. Any method | | |
| d. System defined methods | | |
| v) Which component is used to compile, debug and execute java program? | 1 | CO2 |
| a. JVM | | |
| b. JDK | | |
| c. JIT | | |
| d. JRE | | |

- vi) What would be behavior if the constructor has a return type? 1 CO5
- Compilation error
 - Runtime error
 - Compilation and runs successfully
 - Only String return type is allowed
- vii) Which of the below is invalid identifier with the main method? 1 CO5
- Public
 - Static
 - Private
 - final
- viii) 1. class Output 1 CO4
- {
 - public static void main(String
 - args[])
 - {
 - int a1[] = new int[10];
 - int a2[] = {1, 2, 3, 4, 5};
 - System.out.println(a1.length + " " + a2.length);
 - }
 - }
- What is the output of the above code?
- 10 5
 - 5 10
 - 0 10
 - 0 5
- ix) Which of these classes are used by character streams for input and output operations? 1 CO5
- InputStream
 - Writer
 - ReadStream
 - InputStream
- x) What is multithreaded programming? 1 CO5
- It's a process in which two different processes run simultaneously
 - It's a process in which two or more parts of same process run simultaneously
 - It's a process in which many different process are able to access same information
 - It's a process in which a single process can access information from many sources

- | | | | |
|------|--|---|-----|
| xi) | Which of these methods is a part of Abstract Window Toolkit (AWT)? | 1 | CO4 |
| | a. display() | | |
| | b. paint() | | |
| | c. drawString() | | |
| | d. transient() | | |
| xii) | Thread priority in Java is? | 1 | CO4 |
| | a. Integer | | |
| | b. Float | | |
| | c. Double | | |
| | d. long | | |

GROUP – B**(Short Answer Type Questions)**(Answer any *three* of the following)**3 x 5 = 15**

- | | | Marks | CO No. |
|-------|--|--------------|---------------|
| 2. | Explain life cycle of Thread | 5 | CO4 |
| 3. | Explain the use of ' this ' keyword and the ' super ' keyword in Java programming. | 5 | CO3 |
| 4. a) | What is data encapsulation and data abstraction? | 3 | CO2 |
| b) | What do you mean by garbage collection in Java? | 2 | CO5 |
| 5. a) | Write a program to reverse a String using String class. | 3 | CO2 |
| b) | How does String class differ from String buffer? | 2 | CO2 |
| 6. | What is String in Java? What is the difference between equals () method and == operator? | 5 | CO5 |

GROUP – C**(Long Answer Type Questions)**(Answer any *three* of the following)**3 x 15 = 45**

- | | | Marks | CO No. |
|--------|---|--------------|---------------|
| 7. a) | Explain Method Overriding with a suitable example. | 6 | CO1 |
| b) | Define Inheritance and also write down the types of Inheritance. | 5 | CO5 |
| c) | What is Inner class? | 4 | CO4 |
| 8. a) | What is an exception? | 2 | CO1 |
| b) | Explain the difference between Error and Exception. | 4 | CO2 |
| c) | Define User defined exception with example. | 5 | CO1 |
| d) | Explain Threading | 4 | CO5 |
| 9. a) | Write a program to demonstrate the "ArrayIndexOutOfBoundsException". | 4 | CO4 |
| b) | Write down the difference between abstract class and Interface. What is meta class? | 6 | CO1 |
| c) | Why we need Interface? Explain with a suitable example. | 5 | CO1 |
| 10. a) | Write a java program that take 5 student's Name, Roll, Stream and Name of College using interface and print it. | 5 | CO5 |
| b) | Write a java program to demonstrate Multithreading concept. | 5 | CO4 |
| c) | Can constructor be overloaded? Explain with proper example. | 5 | CO1 |
| 11. | Short notes(Any three) | 3X=15 | CO3 |
| a) | RMI | 5 | CO3 |
| b) | Built-in packages in Java | 5 | CO3 |
| c) | Inheritance | 5 | CO3 |
| d) | Wrapper class | 5 | CO3 |
| e) | JVM | 5 | CO3 |